

portion 32, the L-shaped rear portion 38, the connector 34, and the legs 27, 26 and 28. These various components can be arranged in a compact fashion for storage and/or transport.

IN THE CLAIMS:

Please amend the claims as follows. A marked-up copy of the changes made to the claims below is submitted herewith.

1. (Amended) An apparatus for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, the apparatus comprising:

a first radiation source that emits radiation arranged at a first side of the vehicle path;

a first reflector arranged on a second, opposite side of the vehicle path from said first radiation source that reflects radiation emitted from said first radiation source back towards the first side of the vehicle path;

a first detector arranged at the first side of the vehicle path that receives the reflected radiation from said first reflector and detects a presence and absence of the reflected radiation;

a second radiation source that emits radiation arranged at the first side of the vehicle path;

a second reflector arranged on the second, opposite side of the vehicle path from said second radiation source that reflects radiation emitted from said second radiation source back towards the first side of the vehicle path;

a second detector arranged at the first side of the vehicle path that receives the reflected radiation from said second reflector and detects a presence and absence of the reflected radiation;

said first and second radiation sources separated substantially the same distance apart along the vehicle path as said first and second reflectors, with said radiation sources positioned substantially in the same plane of the vehicle path as said reflectors; and

a controller operatively connected to said first and second detectors that calculates at least one of the speed and acceleration of the vehicle in response to said first and second detectors.

8. (Amended) An apparatus according to claim 2, wherein said first and second sender/detector units are each affixed into a permanent installation on a first side of the vehicle path.

9. (Amended) An apparatus according to claim 3, wherein said first and second reflectors are each affixed into a permanent installation on a second, opposite side of the vehicle path.

14. (Amended) An apparatus according to claim 13, wherein the modulated laser beam source modulates a beam at a rate greater than approximately 20 kHz.

15. (Amended) An apparatus according to claim 1, further comprising a tilt sensor that measures a tilt of the vehicle path relative to a level path, wherein said controller determines a Vehicle Specific Power of the vehicle due to calculated acceleration and measured tilt.

16. (Amended) An apparatus for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, the apparatus comprising:

first radiation means for emitting radiation arranged at a first side of the vehicle path;

first reflector means arranged on a second, opposite side of the vehicle path from said first radiation means for reflecting radiation emitted from said first radiation means back towards the first side of the vehicle path;

first detector means arranged at the first side of the vehicle path that receives the reflected radiation from said first reflector means for detecting a presence or absence of the reflected radiation;

second radiation means for emitting radiation arranged at the first side of the vehicle path;

second reflector means arranged on the second, opposite side of the vehicle path from said second radiation means for reflecting radiation emitted from said second radiation means back towards the first side of the vehicle path;

second detector means arranged at the first side of the vehicle path that receives the reflected radiation from said second reflector means for detecting a presence or absence of the reflected radiation; and

calculating means operatively connected to said first and second detectors, for calculating at least one of the speed and acceleration of the vehicle in response to said first and second detectors.

17. (Amended) A method according to claim 16, wherein the first and second radiation and detector means are each affixed to a permanent installation on a first side of the vehicle path.

18. (Amended) A method according to claim 16, wherein the first and second reflector means are each affixed to a permanent installation on a second, opposite side of the vehicle path.

19. (Amended) A method for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, comprising the steps of:

emitting radiation from a first side of the vehicle path;

reflecting radiation emitted from said radiation emitting step at a second, opposite side of the vehicle path back towards the first side of the vehicle path;

receiving at the first side of the vehicle path the reflected radiation from the reflecting step;

securing said radiation emission and radiation reflection in substantially the same plane as the vehicle path;

detecting a presence or absence of the reflected radiation; and

calculating at least one of the speed and acceleration of the vehicle in response to the detecting step.

25. (Amended) A method according to claim 19, further comprising the steps of:
measuring a tilt of the vehicle path relative to a level path; and
determining a Vehicle Specific Power of the vehicle due to the calculated acceleration based in part on the measured tilt.

26. (Amended) An apparatus for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, comprising:

means for emitting radiation from a first side of the vehicle path;
means for reflecting radiation emitted from said radiation emitting step at a second, opposite side of the vehicle path back towards the first side of the vehicle path;
means for receiving at the first side of the vehicle path the reflected radiation from the reflecting step;
means for securing said radiation emitting means and securing said reflecting radiation means in substantially the same plane as the vehicle path;
means for detecting a presence or absence of the reflected radiation; and
means for calculating at least one of the speed and acceleration of the vehicle in response to the detecting step.

27. (Amended) An apparatus according to claim 26, further comprising: